

### **Remarks / Arguments**

Claims 1-20 are pending in this application. Claims 1-20 stand rejected. Claims 2, 16, and 18 are amended.

The applicants believe that in view of these amendments and the following discussion, all of the claims in this application are allowable. If, however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, it is requested that the Examiner telephone Jeffery J. Brosemer, Ph.D., ESQ. at 732-335-5773 so that arrangements may be made for resolving such issues as expeditiously as possible.

#### **Claim Rejections – 35 U.S.C § 102(a)**

Claims 1-5, 9-12, 17, and 20 are rejected under the provisions of 35 U.S.C § 102(a) as being anticipated by an article entitled "10-Gb/s RZ-DPSK Transmitter Using a Saturated SOA as a Power Booster and Limiting Amplifier", published in IEEE Photonics Technology Letters, Vol.16, No.6, pp 1582-1584, 2004, authored by Xing Wei, Yikai Su, Xiang Liu, Juerg Leuthold and S.Chandrasekhar (hereinafter IEEE paper).

Before discussing these rejections further, it is noted that the applicants of this application are also the co-authors of the IEEE paper. Furthermore, the filing date February 27, 2004, of this application is within one year of the date (December 24, 2003) of manuscript receipt of the IEEE paper as well as a subsequent date (February 9, 2004) of a revised manuscript. Accordingly, the IEEE paper was not published more than one year prior to the present application.

The applicants traverse the rejections grounded in the IEEE paper because the subject matter of the IEEE paper is the applicants' own work. A declaration under CFR 1.132 is presented with this amendment in support of the

same. The applicants therefore respectfully request that this rejection be withdrawn.

**Claim Rejections – 35 U.S.C § 103(a)**

Claims 6-8, 13-16, 18, and 19 are rejected under the provisions of 35 U.S.C § 103(a) as being unpatentable over US patent No. 7,116,908 issued to Uda et al. on October 3, 2006 (hereinafter Uda '908 patent) in view of the IEEE paper.

As noted previously, claims 16 and 18 have been amended. More specifically claim 16 as amended now recites that a plurality of semiconductor optical amplifier are optically coupled to a demultiplexer for separately providing optical amplification to a respective ones of the plurality of channels.

Substantially similar limitations are also recited in amended claim 18, wherein a plurality of semiconductor optical amplifiers are optically coupled to each one of the input ports of a multiplexer, wherein each one of the plurality of semiconductor optical amplifiers are adapted to separately suppress transient optical power fluctuations in each one of the plurality of the optical channels, and provide optical power equalization between the plurality of optical channels to be multiplexed.

While the Uda '908 patent addresses output power equalization in a Wavelength Division Multiplexed (WDM) optical signal, it specifically teaches a demultiplexer (205) that demultiplexes the WDM signal into four different bands, each band covering a range of wavelengths (B (1530-1545 nm), R (1545-1560 nm), L1 (1560-1575 nm) and L2 (1575-1590 nm)). Each band covering a range of wavelengths is amplified (as a group) in respective ones of optical amplifiers (203(1)-203(4)).

In particular, a gain tilt control unit (710) shown in Fig.4 in the Uda '908 patent, determines gain tilts between each band of wavelengths, provides the tilt correction in the respective optical amplifiers for the range of wavelengths for each band, such that the output powers for the range of wavelengths in each band are equalized after amplification. Subsequently, a multiplexer (204)

multiplexes the four bands, each band having a range of wavelengths (please see col.6 lines 35-46, and col. 7, lines 20-25).

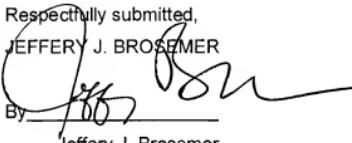
In sharp contrast, a channel power equalizer claimed in this application comprises a demultiplexer that demultiplexes an optical signal into a plurality of optical channels, each ones of said channels having a different optical wavelength, and a plurality of semiconductor amplifiers which provide optical amplification to each respective ones of the plurality of channels (on a per-channel basis), and a multiplexer multiplexes the plurality of optical channels after amplification.

Accordingly, the applicants submit that the Uda '908 patent does not teach optical amplification of a plurality of optical channels using a respective plurality of semiconductor optical amplifiers on a per-channel basis. Therefore, the Uda '908 patent does not render now amended claim 16 obvious. Since the amended claim 18 recites substantially similar limitations, the Uda '908 patent does not render that claim obvious either.

**Conclusion:**

The applicants submit that all of the claims now present in the application fully comply with the provisions of 35 U.S.C. § 102 and 35 U.S.C. § 103 and are therefore allowable. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

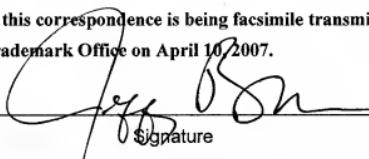
Respectfully submitted,  
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**CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. 1.8(a)**

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on April 10, 2007.



Signature

**Jeffery J. Brosemer**

Typed or printed name of person signing certificate

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